

## VEGF Human, HEK

**Description:** Vascular Endothelial Growth Factor Human Recombinant produced in HEK293 cells is a double, glycosylated, polypeptide chain containing 165 amino acids and having a molecular mass of 40 kDa. The VEGF is purified by proprietary chromatographic techniques.

**Synonyms:** Vascular endothelial growth factor A, VEGF-A, Vascular permeability factor, VPF, VEGF, MGC70609.

**Source:** HEK293 (Human Embryonic Kidney cell line).

**Physical Appearance:** Sterile Filtered White lyophilized (freeze-dried) powder.

**Amino Acid Sequence:** APMAEGGGQN HHEVVKFMDV YQRSYCHPIE TLVDIFQEYP  
DEIEYIFKPS CVPLMRCGGC CNDEGLECVP TEESNITMQI MRIKPHQGQH IGEMSFLQHN  
KCECRPKKDR ARQENPCGPC SERRKHLFVQ DPQTKCCK NTDSRCKARQ LELNERTCRC  
DKPRR.

**Purity:** Greater than 95.0% as determined by SDS-PAGE.

**Formulation:**

The protein was lyophilized from a concentrated (1mg/ml) solution with no additives.

**Stability:**

Lyophilized Vascular Endothelial Growth Factor HEK although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution VEGF HEK should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

**Usage:**

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

**Solubility:**

It is recommended to reconstitute the lyophilized Vascular Endothelial Growth Factor-HEK in sterile 18M-cm H<sub>2</sub>O not less than 100

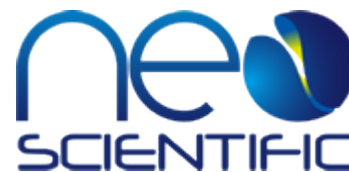
**Introduction:**

Vascular endothelial growth factor is an important signaling protein involved in both vasculogenesis and angiogenesis. As its name implies, VEGF activity has been mostly studied on cells of the vascular endothelium, although it does have effects on a number of other cell types (e.g. stimulation monocyte/ macrophage migration, neurons, cancer cells, kidney epithelial cells). VEGF mediates increased vascular permeability, induces angiogenesis, vasculogenesis and endothelial cell growth, promotes cell migration, and inhibits apoptosis. In vitro, VEGF has been shown to stimulate endothelial cell mitogenesis and cell migration. VEGF is also a vasodilator and increases microvascular permeability and was originally referred to as vascular permeability factor. Elevated levels of this protein are linked to POEMS syndrome, also known as Crow-Fukase syndrome. Mutations in this gene have been associated with proliferative and nonproliferative diabetic retinopathy.

**Biological Activity:**

Determined by the dose-dependent stimulation of the proliferation of human umbilical vein endothelial cells (HUVEC) using a concentration range of 1.0-6.0 ng/ml, corresponding to a specific activity of 1 x 10<sup>6</sup> Units/mg to 1.7 x 10<sup>5</sup> Units/mg.

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